

# Broadband - the Need for Statewide Accessibility

House Communications and Technology Committee

MTA Government Relations

## MI Connectivity Needs

Broadband connectivity is vital for economic development, agriculture, education, job training, community development and quality of life

## Township Impact

"High speed internet access is a necessity in the same way that the home telephone once was. While wireless broadband offers hope to some, it often misses areas as it is not cost-effective to place towers close to those areas. We believe this is a critical infrastructure challenge for our times."

## Township Impact

"Access to broadband services is undoubtedly the **most significant barrier limiting economic and community development** within our township. The outdoor recreational characteristics supporting a **strong tourism base requires remote access capability** through various apps as well as a responsible level of emergency service delivery we cannot otherwise attain. Limited or non-existent service is not an option for the future health and vitality of our township."

## Township Impact

"Local real estate agents have told us that areas without broadband access are suffering steadily declining property values as homes cannot be sold to buyers with school age children or those who require internet access for business purposes. The result is lower selling prices and lower taxable values for homes without broadband access. I firmly believe that broadband infrastructure is as important today as telephone and electric infrastructure was over a hundred years ago."

## Township Impact

"Families with school age children would be one of the first to use this decision to NOT move in our area because of the premium cost for having a faster (not necessarily reliable) internet service."

## Lack of Access

- 12 percent without access to fixed broadband at 25 Mbps
- 17 percent without access to fixed broadband at 100 Mbps
- 11 percent without mobile broadband coverage
- 30 percent of businesses without a web presence

## Impacts from Lack of Access

- Cost
  - Increased costs
- Local Government
  - Inability to communicate electronically with residents
  - Inability to electronically submit required reporting

## Impacts from Lack of Access

- Economic Development
  - Loss of business development and retention
  - Underutilization for agriculture
  - Inability to compete
  - Impairment for home business opportunities
- Education

## Impacts from Lack of Access

- Community Development
  - Decreased home values
- Job Training
- Quality of Life

## Changes in Technology

- Need and demand for bandwidth
  - 2009 federal grants - \$4.8 m (National Telecommunications & Information Assistance grants)
  - 2010 National Broadband Plan - 4 Mbps download and 1Mbps upload
  - 2015 FCC - 25Mbps download and 3Mbps upload
  - 2016 21<sup>st</sup> Century Infrastructure Commission – 100 Mbps download

## Accessibility Gaps

- 2015 National Broadband Progress Report - Deployment of high-speed Internet in U.S. not keeping up with current needs
- Michigan gaps in suburban and rural areas
  - 12 counties (identified by Connect Michigan) fall below 40 percent of households with 25 Mbps download/3Mbps upload



**Table 5 - Estimated Availability of Broadband Service by County**  
**Terrestrial Broadband (Excluding Mobile)**

			≥ 768 Kbps Download/200 Kbps Upload Speeds	≥ 3 Mbps Download/768 Kbps Upload Speeds	≥ 6 Mbps Download/1 Mbps Upload Speeds	≥ 10 Mbps Download/1 Mbps Upload Speeds	≥ 25 Mbps Download/3 Mbps Upload Speeds
County	Household Density	Number of Households	Percentage Households Served				
Alcona	7.3	5,089	83.46	82.72	81.33	79.43	73.83
Alger	4.2	3,898	91.45	89.48	83.93	83.93	83.93
Allegan	49.9	42,018	98.22	97.85	93.86	92.11	72.41
Alpena	21.6	12,791	95.78	95.78	95.68	93.50	93.43
Antrim	18.9	9,890	98.15	98.04	97.60	94.87	76.94
Arenac	18.2	6,701	98.97	98.73	97.91	64.99	62.12
Baraga	3.8	3,444	96.14	96.09	96.03	94.75	93.55
Barry	39.1	22,551	97.19	96.06	91.66	76.79	28.34
Bay	99.8	44,603	99.98	99.96	98.47	96.61	95.60
Benzie	21.0	7,288	97.30	97.03	94.07	94.07	79.79
Berrien	108.8	63,054	99.96	99.47	97.12	96.33	91.48
Branch	31.6	16,419	99.74	99.70	99.54	99.18	66.01
Calhoun	75.2	54,016	95.63	95.00	94.10	93.98	69.25
Cass	40.5	20,604	98.59	97.36	88.93	78.78	73.66
Charlevoix	23.4	10,882	98.63	98.22	95.33	95.33	84.80
Cheboygan	14.0	11,133	90.49	88.82	82.51	76.46	60.03
Chippewa	9.1	14,329	93.66	93.19	87.59	87.59	71.89
Clare	22.6	12,966	99.27	99.11	93.52	80.15	71.27
Clinton	50.1	28,766	98.84	98.41	95.02	91.38	52.36
Crawford	10.7	6,016	94.25	94.11	91.15	89.12	56.76
Delta	13.6	15,992	92.76	91.22	87.88	86.48	86.47
Dickinson	14.6	11,359	96.61	96.07	94.75	94.15	89.74
Eaton	75.1	43,494	97.77	95.09	89.87	88.98	53.15
Emmet	28.2	13,601	98.46	98.23	95.49	95.49	76.22
Genesee	280.7	169,202	99.88	99.85	99.47	99.43	98.21



			≥ 768 Kbps Download/200 Kbps Upload Speeds	≥ 3 Mbps Download/768 Kbps Upload Speeds	≥ 6 Mbps Download/1 Mbps Upload Speeds	≥ 10 Mbps Download/1 Mbps Upload Speeds	≥ 28 Mbps Download/3 Mbps Upload Speeds
County	Household Density	Number of Households	Percentage Households Served				
Gladwin	20.9	10,753	97.45	88.25	83.05	55.11	41.02
Gogebic	6.1	7,037	97.28	97.28	97.26	96.20	82.20
Grand Traverse	72.2	35,328	99.83	99.81	99.46	99.46	96.24
Gratiot	26.0	14,852	100.00	100.00	100.00	100.00	79.71
Hillsdale	29.3	17,792	99.19	99.18	93.28	90.56	61.07
Houghton	13.7	14,232	97.81	97.68	97.66	96.08	89.56
Huron	17.2	14,348	99.97	99.95	75.97	72.77	70.65
Ingham	188.4	111,162	99.67	99.82	97.29	96.64	79.88
Ionia	38.2	22,144	98.43	97.14	84.05	81.30	43.65
Iosco	20.8	11,757	99.15	99.02	98.73	83.83	78.41
Iron	4.6	5,577	96.76	95.95	94.26	41.53	15.99
Isabella	44.3	25,586	100.00	100.00	100.00	100.00	79.73
Jackson	84.0	60,771	99.00	98.46	92.12	89.86	75.06
Kalamazoo	173.5	100,610	99.50	98.88	98.56	98.28	97.16
Kalkaska	12.2	6,962	98.30	98.04	98.03	98.03	39.94
Leont	260.8	227,239	99.98	99.97	99.91	99.65	96.46
Leweenaw	1.8	1,013	88.18	87.58	87.13	60.75	54.89
Lake	9.0	5,158	86.40	84.25	44.37	39.28	1.00
Leapeer	49.5	32,776	99.89	99.74	85.11	72.03	69.49
Leelanau	25.1	9,255	99.70	99.38	98.54	96.54	83.82
Leenawee	49.3	37,514	99.81	99.80	95.62	83.26	73.87
Livingston	115.2	67,380	99.57	99.51	97.90	97.55	85.23
Lice	2.6	2,412	87.08	86.79	86.70	86.70	1.30
MacKinac	4.8	5,024	85.74	84.95	66.91	66.91	41.45
Macomb	685.6	331,667	99.94	99.84	99.53	99.38	98.64
Manistee	18.5	10,308	98.57	95.90	79.11	79.11	70.83
Marquette	14.7	27,538	95.16	94.23	92.53	89.79	89.05



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County	Household Density	Number of Households	Percentage Households Served				
Mason	23.4	11,940	98.14	98.14	98.07	97.83	65.28
Mecosta	28.2	16,101	100.00	100.00	90.91	90.82	73.42
Menominee	10.0	10,474	76.92	76.42	74.07	74.07	62.56
Midland	63.4	33,437	99.92	99.88	99.81	99.70	90.24
Missaukee	10.2	5,843	94.46	93.27	85.85	55.07	32.90
Monroe	105.0	58,230	98.94	98.42	96.60	93.19	91.93
Montcalm	32.5	23,432	100.00	100.00	98.08	96.87	81.13
Montmorency	7.9	4,416	87.90	87.90	86.64	66.09	0.77
Muskegon	124.5	65,616	99.87	99.87	99.69	99.05	92.85
Newaygo	21.4	18,406	99.71	99.71	86.91	81.54	48.00
Oakland	533.5	483,698	99.92	99.90	99.80	99.51	97.17
Oceana	18.6	10,174	95.07	95.04	79.66	65.68	39.56
Ogemaw	16.2	9,283	99.33	99.15	99.13	80.12	78.74
Ontonagon	2.5	3,258	97.36	97.36	97.36	97.36	93.15
Osceola	16.1	9,222	100.00	100.00	61.95	45.49	29.85
Oscoda	6.6	3,772	96.35	96.35	96.18	60.35	5.00
Otsego	18.6	9,756	95.72	95.69	95.54	89.47	71.64
Ottawa	162.7	93,775	99.98	99.98	99.97	99.92	97.74
Presque Isle	8.7	5,982	86.59	86.48	82.59	78.69	30.08
Roscommon	19.7	11,433	98.31	98.21	98.21	96.27	95.84
Saginaw	96.9	79,011	100.00	100.00	99.49	99.49	94.50
St. Clair	88.3	63,841	98.93	98.45	91.58	84.03	80.51
St. Joseph	44.6	23,244	95.09	94.09	89.87	82.32	74.89
Sanilac	17.8	17,132	99.21	96.68	53.68	48.46	24.96
Schoolcraft	3.1	3,759	76.03	74.31	62.95	62.95	62.68
Shiawassee	50.9	27,481	99.94	99.89	99.64	99.60	76.58
Tuscola	26.5	21,590	99.79	99.22	72.37	70.07	64.60



			≥ 768 Kbps Download/200 Kbps Upload Speeds	≥ 3 Mbps Download/768 Kbps Upload Speeds	≥ 6 Mbps Download/1 Mbps Upload Speeds	≥ 10 Mbps Download/1 Mbps Upload Speeds	≥ 25 Mbps Download/3 Mbps Upload Speeds
County	Household Density	Number of Households	Percentage Households Served				
Van Buren	46.4	28,928	98.01	98.01	96.22	92.83	61.51
Washtenaw	180.1	137,193	99.25	98.96	96.40	95.60	92.98
Wayne	1139.2	702,749	99.85	99.84	99.83	99.83	98.97
Wexford	22.6	13,021	89.83	88.86	87.73	85.77	69.44

Source: Connect Michigan, Sept. 2016.

Table 1 – Estimate of Broadband Service Availability in the State of Michigan –  
By Speed Combination Among Fixed Platforms

Download/Upload Speed	Unserved Households ('000)	Served Households ('000)	Percent of Served Households by Speed Combo
At Least 768 Kbps/200 Kbps	33	3,839	99.14
At Least 1.5 Mbps/200 Kbps	37	3,835	99.89
At Least 3 Mbps/768 Kbps	43	3,830	98.89
At Least 8 Mbps/1 Mbps	123	3,750	96.83
At Least 10 Mbps/1 Mbps	186	3,686	95.19
At Least 25 Mbps/3 Mbps	459	3,414	88.15
At Least 50 Mbps	479	3,393	87.63
At Least 100 Mbps	676	3,187	82.55
At Least 1 Gbps	3,773	99	2.58

Source: Connect Michigan, Sept. 2016.

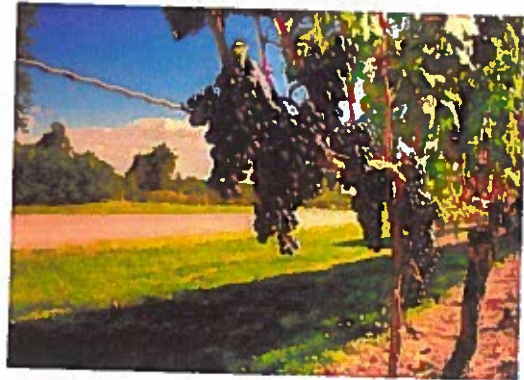
## Economic Development depends on broadband

- Job creation and retention
- Telecommuting
  - Emerging career opportunities
  - Increased productivity
  - Less traffic congestion
  - Fewer carbon dioxide emissions
- Home-based businesses
  - 2013 - 1.16 million utilized to sell goods or services



## Economic Development

"This [lack of broadband access and reliability] has been a major issue in our Township for many years. It is affecting the capability of businesses particularly the wineries in the Township."



## Economic Development

"[We have] no internet or cable [and] want both; cannot get companies to serve rural areas..... Disheartening.."



## Educational Benefits from Broadband

- Opportunities to expand technical skills through online learning
  - Helps those who have lost jobs to obtain new skills
- Availability helps students living in all areas have the same educational opportunities and attainment as others

## Educational Benefits

"I received a complaint from a resident a few weeks ago that his children are now required to do more school assignments that require internet access. It causes them to go over their cellular data allowance. To try to avoid this, they go to our library and use the free Wi-Fi, which on school nights isn't always convenient with their busy schedules of raising young children."

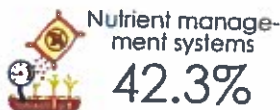
## Agriculture reliance on Broadband

- Precision ag technology
  - Fertilizer application rates
  - Crop yields
  - Moisture levels
  - Plant health and maturity
  - Insect damage or weed competition by acre
- Weather forecast
- Purchasing or real time marketing
- Collect data on crop yields
- Transfer real time data storage and transfer

## Technology for Agriculture



Among ag-producers in northern Michigan, many are currently using, or planning to use, various types of connected equipment. Additionally, many producers are using their internet connections DAILY to perform a myriad of tasks.





## Broadband support for Tourism

- Access capabilities
- Apps
- Mobile advertising
- Promoting activities
- Marketing strategies

“The outdoor recreational characteristics supporting a strong tourism base require remote access capability.”

## Quality of Life impacted by Broadband

Provides value to aging and disabled populations:

- housing
- transport
- health care
- communication
- community support services, leisure, and culture

## 21<sup>st</sup> Century Infrastructure Commission



### Report Goals

- All residents and businesses have access to a fixed broadband connection with 25Mbps/3Mbps by 2020 and a download speed of 100 Mbps by 2024
- All community anchor institutions have access to a fixed broadband connection with download and upload speeds that meet minimum recommended speeds for their sector by 2024
- All areas of the state have access to a mobile broadband connection with a download speed of at least 10 Mbps by 2020 and at least 25 Mbps by 2024

## Report Goals

- 95 percent of residents have adopted a fixed and mobile broadband connection at home by 2024
- 95 percent of businesses have a web presence by 2020
- All community anchor institutions have adopted a fixed broadband connection by 2024

## Township Solutions

- Sharon Twp. (Washtenaw) - possible installation of own fiber optic cable to every household
  - Holding meetings to assess citizen interest
  - Possible millage vote
- Wakefield Twp. (Gogebic) - assisted provider in securing land and erecting a tower for Internet service
- Laketon Twp. (Allegan) - local ballot proposal to install fiber optic network



## Constitutional Authority

- Article VII, Section 29: "No person, partnership, association or corporation, public or private, operating a public utility shall have the right to the use of the highways, streets, alleys or other public places of any county, township, city, or village for wires, poles, pipes, tracks, conduits or other utility facilities, **without the consent of the duly constituted authority of the county, township, city or village**; or to transact local business therein without first obtaining a franchise from the township, city or village. **Except as otherwise provided in this constitution the right of all counties, townships, cities and villages to the reasonable control of their highways, streets, alleys and public places is hereby reserved to such local units of government.**"

## METRO ACT – PAs 48-50 of 2002

- MI Broadband Development Authority
- Allow issuance of bonds and notes to develop broadband infrastructure
- Streamlined process for authorizing providers access to right-of-way
- Assess fees on telecommunications providers:
  - Five cents per linear foot
  - One cent for cable companies, waived if certain level of investment
- **Requires municipalities to use funds solely for right-of-way purposes**

## Metro Act

- Requires providers to obtain a permit from municipality
- Prohibits providers from passing along maintenance fees to customers
- Allows providers to take a tax credit against their Utility Property Tax
- Requires providers to return right-of-way to original condition
- Require municipalities over 10,000 in population to file a report

## QUESTIONS

MTA Government Relations

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